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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/341,085	07/02/1999	CAREL J.L. VAN DRIEL	PHN17.110	4715

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EXAMINER	
NGUYEN, THU HA T	
ART UNIT	**PAPER NUMBER**
2155	22

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/341,085	VAN DRIEL, CAREL J.L.	
	Examiner	Art Unit	
	Thu Ha T. Nguyen	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims **1, 3-7** are presented for examination.

Response to Arguments

2. Applicant's arguments filed on December 18, 2003 have been fully considered but they are not persuasive because of the following reasons:

3. Applicant argues that Hiekali does not teach or suggest an access node connected to a transmission network and a non-dedicated network switch using a signaling protocol, the network control elements include a network control switch and a plurality of channel cluster modules, the channel cluster modules are arranged for transmitting downstream signals on one carrier frequency and are coupled to the sub-network corresponding to the network control node. In response to Applicant's argument, Patent Office asserts that Hiekali does teach an access node connected to a transmission network and a non-dedicated network switch using a signaling protocol, the network control elements include a network control switch and a plurality of channel cluster modules, the channel cluster modules are arranged for transmitting downstream signals on one carrier frequency and are coupled to the sub-network corresponding to the network control node as shown in figures 3-5, 8-10, abstract, col. 2 lines 5-33, col. 3 lines 3-59, col. 14 lines 20-60. ATM gateway controls plurality of network elements 302 and plurality of ports for connection to plurality of users.

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the reason to combine the teaching of Hiekali and Bronstein because it would provide an efficient data communications network that has plurality of network switches that can control, manage and reconfigure the multiplexing of sub-network systems.

5. As a result, cited prior art does disclose a system fro improved access network, as broadly claimed by the Applicants. Applicants clearly have still failed to identify specific claim limitations that would define a clearly patentable distinction over prior arts.

6. Therefore, the examiner asserts that cited prior art teaches or suggests the subject matter broadly recited in independent claims 1 and 7. Claims 3-6 are also rejected at least by virtue of their dependency on independent claims and by other reasons set forth in the previous office action [see paper no. 20]. Accordingly, claims 1, 3-7 are rejected.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 7 lack of positive antecedent basic. In claim 1, Applicant recites the limitation "...the network switch...." There is insufficient antecedent basic for this limitation in the claim. In claim 7, Applicant recites the limitation "...the network switch...the network control node...." There is insufficient antecedent basic for this limitation in the claims.

9. Appropriate correction is required.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1, 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hiekali** U.S. Patent No. **5,619,500**, and **Bronstein et al.**, (hereinafter Bronstein) U.S. Patent No. **5,910,954**, further in view of **Bigham et al.**, (hereinafter Bigham) U.S Patent No. **5,740,075**.

12. As to claim 1, **Hiekali** teaches the invention as claimed, including communication system comprising:

a plurality of terminals (figures 2, 4, element 205) which are connected to an access network (figure 2-3, col. 3 lines 3-25), the access network having,

an access node connected to a transmission network and a non-dedicated network switch using a signaling protocol, the network control elements include a network control switch and a plurality of channel cluster modules, the channel cluster modules are arranged for transmitting downstream signals on one carrier frequency and are coupled to the sub-network corresponding to the network control node (figures 3-5, 8-10, abstract, col. 2 lines 5-33, col. 3 lines 3-59, col. 14 lines 20-60).

However, **Hiekali** does not explicitly teach wherein the access node includes an access node switch couple to the network switch and a plurality of network control elements, the access node switch controls all of the network specific switching and the transmission network comprises a plurality of sub-networks coupled to the network control elements. **Bronstein** teaches wherein the access node includes an access node switch couple to the network switch and a plurality of network control elements, the access node switch controls all of the network specific switching (figures 1, 4-5, abstract, col. 2 lines 50-col. 4 lines 30), and wherein, the transmission network comprises a plurality of sub-networks coupled to the network control elements (figures 1, 4-5). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teachings of **Hiekali and Bronstein** to have the access node includes an access node switch couple to the network switch

and a plurality of network control elements, the access node switch controls all of the network specific switching and the transmission network comprises a plurality of sub-networks coupled to the network control elements because it would have an efficient data communications network that has plurality of network switches that can control, manage and reconfigure the multiplexing of sub-network systems.

Hiekali does not explicitly teach the access node switch need not to know a carrier frequency allocated to a terminal coupled to a sub-network. **Bigham** teaches an access sub-network (15 sub 2) receives request/transmits response to CPE device (17). Access sub-network also has a frequency converter to convert the receipt signal. Therefor a control sub-network (15 sub3) does not need to know the carrier frequency of all the CPE devices (figures 1, 4, col. 29 lines 19-col. 30 lines 30. It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to include carrier frequency as teaching in **Bigham** to **Hiekali** teaching feature because it would have an efficient communication system that improves the control structure of the network, reduce overload and failure of network operating conditions.

13. As to claim 3, **Hiekali** teaches the invention as claimed, wherein the channel cluster modules comprise at least one downstream channel module (figure 5, col. 3 lines 60-col. 5 lines 45, col. 6 lines 8-col. 7 lines 15).

14. As to claim 4, **Hiekali** teaches the invention as claimed, characterized in that the channel cluster module comprises an upstream channel module (figures 5-6, col. 3 lines 60-col. 5 lines 45, col. 6 lines 8-col. 7 lines 15).

15. As to claim 5, **Hiekali** teaches the invention as claimed, wherein the terminals comprises signaling means for exchanging network layer control information with the network switch (figure 4, abstract, col. 2 lines 5-33).

16. As to claim 6, **Hiekali** teaches the invention as claimed, wherein the network switch comprises proxy signaling means for deriving network layer control information from session layer and/or transport layer information exchanged between a terminal and the network switch (figure 4, abstract, col. 3 lines 60-col. 5 lines 45).

17. As to claim 7, **Hiekali** teaches the invention as claimed, including access node connectable to a transmission network, and to a non-dedicated network switch, the access node comprising:

an access node switch coupled to a plurality of network control elements, wherein the access node switch is connectable to the network switch and wherein the network control elements comprise a network control switch and a plurality of channel cluster modules, in that a network control node router is coupled to a access node router and to the channel cluster modules, and in that the channel cluster modules are

connectable to a sub-network corresponding to the network control node (figures 2-4, abstract, col. 1 lines 32-col. 2 lines 33, col. 3 lines 3-59).

However, **Hiekali** does not explicitly teach the access node switch controls all of the network specific switching and the transmission network comprises a plurality of sub-networks coupled to the network control elements. **Bronstein** teaches the access node switch controls all of the network specific switching (figures 1, 4-5, abstract, col. 2 lines 50-col. 4 lines 30), and wherein, the transmission network comprises a plurality of sub-networks coupled to the network control elements (figures 1, 4-5). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Hiekali and Bronstein** to have the access node switch controls all of the network specific switching and the transmission network comprises a plurality of sub-networks coupled to the network control elements because it would have an efficient data communications network that has plurality of network switches that can control, manage and reconfigure the multiplexing of sub-network systems.

Hiekali does not explicitly teach the access node switch need not to know a carrier frequency allocated to a terminal coupled to a sub-network. **Bigham** teaches an access sub-network (15 sub 2) receives request/transmits response to CPE device (17). Access sub-network also has a frequency converter to convert the receipt signal. Therefor a control sub-network (15 sub3) does not need to know the carrier frequency of all the CPE devices (figures 1, 4, col. 29 lines 19-col. 30 lines 30. It would have been obvious to one of ordinary skill in the Data Processing art at the time of the

invention was made to include carrier frequency as teaching in **Bigham** to **Hiekali** teaching feature because it would have an efficient communication system that improves the control structure of the network, reduce overload and failure of network operating conditions.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (Attached herein PTO-892).

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (703) 305-7447. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SPE Hosain T. Alam, can be reached at (703) 308-6662.

Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

The fax number for art unit 2155 is (703) 746-7239.

Thu Ha Nguyen

February 27, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER